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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/557,577	04/21/2000	Jon Faiz Kayyem	A-63761-5/RFT/RMS/RMK	6551

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EXAMINER	
LEE, MATTHEW C	

ART UNIT	PAPER NUMBER
1631	

DATE MAILED: 03/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/557,577	KAYYEM ET AL.	
	Examiner	Art Unit	
	Matthew C. Lee	1631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *47-49,52,53,60 and 61* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *47-49, 52, 53, 60 and 61* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

MC

Detailed Action

A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 6/15/2004 has been entered.

Applicant's arguments, filed 6/15/04, have been fully considered, but are not deemed to be persuasive. Rejection and/or objections not reiterated from previous office action are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

Prior Art

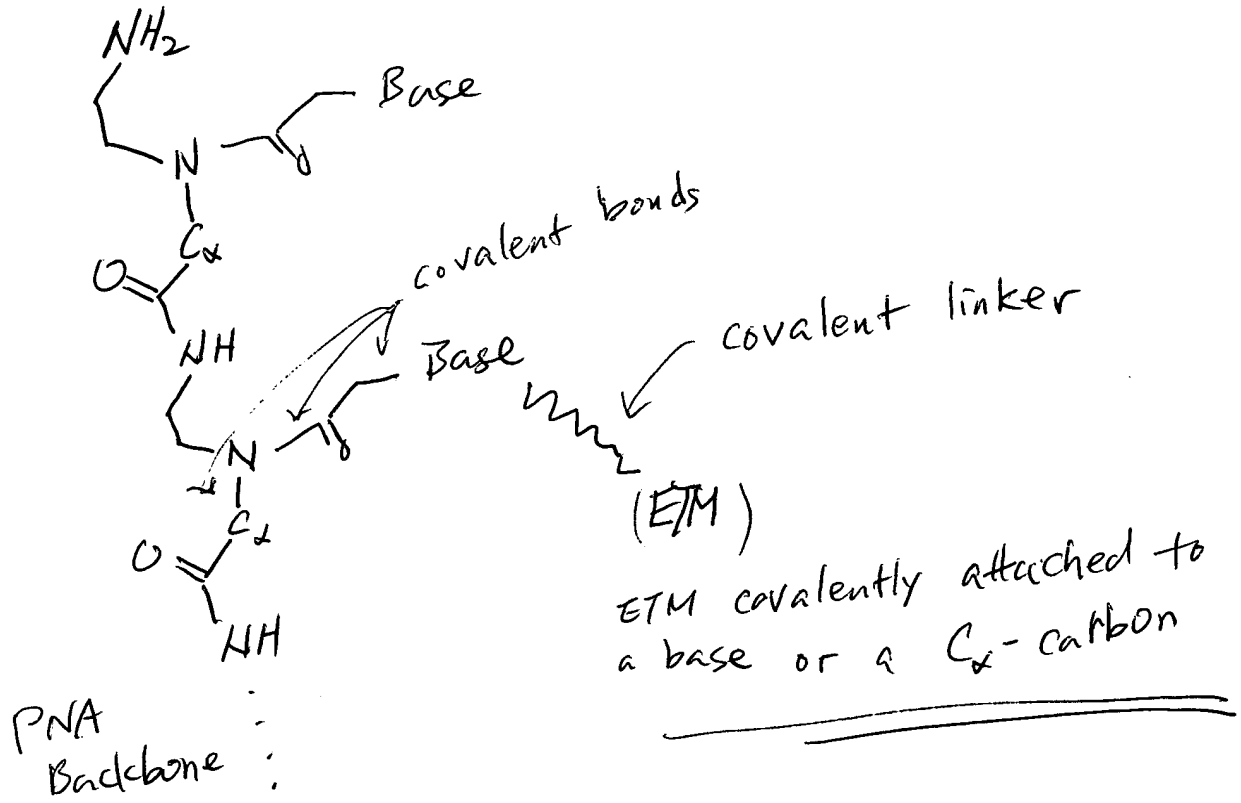
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 47-49, 52 and 53 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Meade et al. (WO 95/15971).

The rejection is reiterated and maintained from the previous office action mailed on 3/9/2004. Applicants argue that Meade et al. is a generic disclosure and that the instant invention is a species that is distinct from the generic invention disclosed in Meade et al., and therefore should be allowable. In particular, applicants argue that the present claims 47-49 and 51-53 are directed to the modification of peptide nucleic acids in which an ETM is covalently attached to an α-carbon, as shown on Figs 31A and 31B, or base of a monomeric subunit. This argument is not found to be persuasive because the present claims recite "covalently attached to..." but do not specify what "covalently attached" is limited to. Applicants are reminded that claim 51 has already been canceled and is therefore not pending for examination. Applicants are further reminded that MPEP 2111 states, *"During patent examination, the pending claims must be "given *>their< broadest reasonable interpretation consistent with the specification." > In re Hyatt, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000).< Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified."* In this instant case, the broadest reasonable interpretation of the claims as recited "...electron transfer moiety covalently attached to..." is not limited to the specific linkage as argued by the applicants. When interpreting whether a given PNA falls within the scope of the claim, one asks the question whether the ETM is attached to the recited sites through covalent attachment.

A structure such as disclosed Meade et al. clearly defines a structure with an ETM covalently attached to the backbone of an amio-modified nucleotide, which includes the PNA recited in the present claims. To further illustrate the point, the following figure shows the schematics of a structure according to Meade et al.



In this structure, the ETM is clearly seeing as "covalently attached" to the α-carbon or base of a monomeric subunit.

While the applicants seem to be arguing that only one covalent bond is present between the α-carbon of a monomeric subunit of PNA and the ETM, no such single covalent bond limitation is seen anywhere in the instant claims. Therefore the covalent

attachment between the ETM and PNA of the reference does anticipate the covalent limitations. Therefore, applicants' argument is not deemed to be persuasive.

Claims 47-49, 52 and 53 are rejected under 35 U.S.C. 102(e)(2) as being clearly anticipated by Megerle (P/N 5,874,046).

This rejection is reiterated and maintained from the previous office action, mailed 3/9/2004. Applicants argue this rejection equivalently to the above rejection. In response, said argument is equally non-persuasive here for the same reasons as described above.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 47-49, 53, 60 and 61 are rejected under 103(a) as being unpatentable over Mirkin et al. (P/N 6,361,944).

The rejection is reiterated and maintained from the previous office action mailed 3/9/2004. Applicants argue this rejection equivalently to the above two rejections. In response, said argument is equally non-persuasive here for the same reasons described above. In addition, applicants argue that Mirkin et al. may not have subject matter priority to predate the instant application. In response, applicants presented the argument as a mere allegation without any factual support, and therefore the argument is not found to be persuasive. Absent any evidence to the contrary, Mirkin et al. is understood to have subject matter priority to this instant application.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C Lee whose telephone number is (571) 272-2931. The examiner can normally be reached on 9am - 5pm, Mon - Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel can be reached on (571) 272-0718. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Matthew C Lee, Ph.D.
Examiner
Art Unit 1631

March 25, 2005

Ardin H. Marschel 3/28/05
ARDIN H. MARSCHEL
PRIMARY EXAMINER